

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method for controlling data traffic over a network, comprising:

- (a) transmitting a message from a first node to at least a second node of the network;
- (b) determining an elapsed time of the transmission of the message of step (a);
- (c) determining whether the second node has replied to the message transmitted in step (a) from the first node; and
- (d) transmitting a subsequent message from the first node upon receipt of a reply from the second node or upon the elapsed time of transmission of the message exceeding an elapsed time threshold,

wherein the elapsed time threshold is determined by a size of the message, a virtual number of nodes over the network, and a minimum transmission rate of the network.

Claim 2 (Original): The method of claim 1, wherein step (a) further comprises:

- (a1) constructing the message to be transmitted; and
- (a2) maintaining transmission information relating to the message.

Claim 3 (Original): The method of claim 1, wherein step (c) further comprises (c1) receiving a reply message from the at least one second node.

Claim 4 (Original): The method of claim 2, wherein step (a2) further comprises storing the following transmission data: message size, transmission sending time and address of the at least one second node.

Claim 5 (Original): The method of claim 4, further including (e) detecting whether a message has been transmitted to the at least one second node; and (f) transmitting a subsequent message to the at least one second node upon detecting the address of the at least one second node in step (e).

Claim 6 (previously presented): The method of claim 1, wherein an elapsed time threshold calculation in step (d) comprises calculating:

$$L \cdot N/R$$

where L is the size of the transmitted message; N is the virtual number of nodes and R is the minimum transmission rate of the network.

Claim 7 (currently amended): A method for controlling the rate of transmitting data over a network from a node of the network, comprising;

- (a) storing information relating to the transmission of data to a node on the network;
- (b) determining a time interval since an initiation of the data transmission of step (a); and

(c) transmitting additional data onto the network upon receiving a reply relating to a prior data transmission or upon the time interval exceeding a threshold time interval,
wherein the threshold time interval is determined by a size of the data, a virtual number of nodes over the network, and a minimum transmission rate of the network.

Claim 8 (Original): The method of claim 7, further comprising
(d) transmitting subsequent amounts of data to a particular node on the network upon locating an address of the particular node stored in step (a).

Claim 9 (currently amended): A communication system, comprising:

a first node coupled to at least one second node by a transmission medium, the first node including a storage device for storing data;

the first node including a processor for determining an elapsed time between data transmission, wherein subsequent data is transmitted from the first node upon receipt of a reply from the at least one second node or upon the elapsed time exceeding an elapsed time threshold,

wherein the elapsed time threshold is determined by a size of the data, a virtual number of nodes over the transmission medium, and a minimum transmission rate of the transmission medium.

Claim 10 (previously presented): The system of claim 9, wherein the storage device stores an identifier of the nodes that the first node has transmitted data to, the first node

transmitting additional data to the at least one second node before receipt of a reply upon determining that a transmission is outstanding at the at least one second node.

Claim 11 (Original): The system of claim 9, wherein the storage device stores the size of the data transmitted to the at least one second node and the elapsed time threshold value is a function of the data size.

Claim 12 (Original): The system of claim 9, further including means for deferring transmission of messages by the first node onto the network, the deferred message(s) being transmitted upon exceeding an elapsed time threshold value.

Claim 13 (Original): The system of claim 9, further including means for deferring transmission of message(s) by the first node onto the network, the deferred message(s) being subsequently transmitted upon the first node receiving a reply from the at least one second node.

Claim 14 (Original): The system of claim 9, wherein the first node comprises a processor and the storage device is an outstanding request queue, the outstanding request queue being at least partially maintained in the processor.

Claim 15 (Original): The system of claim 12, wherein the deferred message(s) are maintained in a deferred message queue, the deferred message queue being at least partially maintained in the first node.

Claim 16 (Original): The system of claim 15, wherein the first node and the least one second node include a processor.

Claim 17 (cancelled)

Claim 18 (cancelled)

Claim 19 (Previously presented): The method of claim 7, wherein the threshold time interval is determined by calculating: $L*N/R$, where L is a size of the data, N is a virtual number of nodes over the network, and R is a minimum transmission rate of the network.

Claim 20 (cancelled)

Claim 21 (Previously presented): The communication system of claim 9, wherein the elapsed time threshold is determined by calculating $L*N/R$, where L is a size of the data, N is a virtual number of nodes over the transmission medium, and R is a minimum transmission rate of the transmission medium.